This article describes a nursing staff training program in basic behavior management skills and a formal staff management system to encourage the application of these basic skills on the nursing unit. Behavioral skills training consists of a 5-hour in-service followed by three weeks of on-the-job training to ensure accurate application of behavior management skills. Following training, a staff management system is used to facilitate long-term use of the skills. Components of the staff management system include supervisory monitoring of the nursing assistants (NAs) by licensed practical nurses (LPNs), NA self-monitoring, verbal and written performance feedback, and incentives.

Key Words: Behavior management, Staff training, Staff motivation, Quality of care

Teaching and Maintaining Behavior Management Skills With Nursing Assistants in a Nursing Home

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Nursing home staff members routinely face a barrage of resident disruptive behaviors. Surveys of nursing home residents have reported moderate to severe behavior problems in 80% of the population (Swearer, Drachman, O’Donnell, & Mitchell, 1988; Zimmer, Watson, & Treat, 1984). Traditionally, nursing homes have responded to episodes of disruptive behavior with restrictive interventions, such as antipsychotic drugs or physical restraints. A growing literature challenges the use of such interventions due to their questionable efficacy and frequent negative consequences for the resident (e.g., increased disorientation from sedating drugs, injuries due to physical restraints).

In response to nursing home reform (American Health Care Association, 1990), nursing homes have reduced the use of pharmacologic interventions and have incorporated behavior management training into certification and continuing education programs for nursing assistants (NAs). Typically, behavior management skills are taught to NAs through didactic workshops or in-services; however, NAs’ knowledge and skill acquisition are seldom assessed (Burgio & Scilley, 1994). We and others (Burgio & Scilley, 1994; Schnelle, Newman, & Fogarty, 1990) have found that formal on-the-job training is essential for the performance of new skills on nursing units. Unfortunately, recent studies suggest that even intensive on-the-job training does not ensure that the performance of NA skills will be maintained over time. For example, Schnelle and colleagues (1990) found improvements in resident continence status after successfully teaching NAs to use prompted voiding procedures to treat urinary incontinence; however, these improvements were not maintained at the 6-week follow-ups. These findings suggest that consistent and accurate application of therapeutic skills by NAs on the unit requires a formal system for managing and motivating learned skills.

The project described in this article employs a comprehensive behavior management skills training curriculum, taught through staff in-services and intensive on-the-job training. Training is integrated with a formal staff management system, termed Behavioral...
Supervision, to facilitate performance and maintenance of these skills on the nursing units. The goal of this article is to provide an overview of the staff training and management procedures we are investigating in this ongoing project.

Setting and Subjects

The research project is being conducted in a 238-bed, county-owned nursing home in central Alabama. The residents are divided into eight distinct nursing units with approximately 30 residents per unit. Forty-two percent of the residents are African American, and 58% are Caucasian. The nursing staff is predominantly female and African American. All NAs are certified by the State of Alabama. Our training and management program is a result of months of planning and a strong partnership between the researchers and nursing and administrative personnel. Implementation of the project was facilitated by a strong and public commitment from the nursing home’s administrator and director of nursing.

Behavioral Skills Training for Nursing Staff

Behavioral skills training consists of a 5-hour in-service and subsequent on-the-job training. All NAs from the day and evening shifts participate in the training and data-collection procedures. Registered nurses (RNs) and licensed practical nurses (LPNs) assigned to the weekday shift also participate.

In-Service Training

The purpose of in-service training is to convey knowledge of basic behavior management skills that can be used with nursing home residents. In-service classes are taught by the research staff (the first author of this article) and are presented for each nursing unit individually. The curriculum (see Table 1) emphasizes the critical role NAs play in implementing behavioral interventions on the nursing unit. In addition to basic information on the goals of the research project and dementia, five major skill areas are emphasized: (1) identifying factors in the environment that can affect resident behavior; (2) identifying the ABCs of residents’ behaviors; (3) communication skills; (4) positive reinforcement procedures; and (5) distraction and diversion techniques. Specific interventions for disruptive vocalization and physical aggression are also described; the importance of individualized written behavioral programs is emphasized. Videotaped skits that depict examples of specific problem behaviors on the unit and written vignettes are discussed in the in-service classes and are supplemented with a workbook that includes all of the information, examples, and vignettes used during training. The in-service training materials were designed at an eighth-grade reading level so they can be understood by NAs with varying levels of educational experience. Although unit RNs and LPNs are present at the in-services, the focus of the training is on the NAs.

On-the-Job Training

Immediately following in-service, researchers begin on-the-job training on behavioral skills in collaboration with the LPNs and RNs on the unit. NAs are evaluated by the researchers, who provide feedback to them on their interactions with a resident during at least one activity of the daily living (ADL) caregiving situation per day. Researchers use a Behavior Management Skills Checklist (BMSC; available from the authors) during the ADL interaction to record whether the NAs display the skills taught during the in-service. The BMSC allows the researcher to note the occurrence of NA verbal prompts, announcements, positive statements, and simple questions, as well as resident behavioral disturbances; NA responses to behavioral disturbances are also recorded. This allows the researcher (and eventually the nursing supervisor) to provide comprehensive and specific feedback to the NAs regarding performance. For example, the trainer might say, "You delivered 12 verbal prompts. That’s great! But only two of your instructions were one-step instructions. Next time, try to use more one-step instructions." This training format permits the NAs to receive hands-on training with residents who have varying levels of ADL care needs and who present various disruptive behaviors.

Logistics of Training Program

In-service classes are scheduled from 2:30 p.m. to 4:30 p.m. on three consecutive days (Tuesday, Wednesday and Thursday). Because nursing units are trained individually, nursing personnel from other units are used to staff the target unit during its in-service. Nursing staff receive overtime pay for attending these mandatory in-services when they are scheduled outside of the staff person’s normal working hours. The schedule and overtime compensation were suggested by and paid for by the nursing home administration. Nursing staff members hired and assigned to a nurs-
ing unit after the unit’s initial training class are required to attend the next scheduled in-service on another unit. In-service classes are scheduled quarterly due to the individual and sequential method of training nursing units required by the research design. The complete in-service curriculum has been videotaped and will be used for training new staff members at the conclusion of the research project. An abbreviated version of the on-the-job training is also conducted as needed for new hires: the research staff instructs the newly hired NA on basic behavioral intervention techniques before the LPNs begin weekly performance evaluations.

The Formal Staff Management System (FSM)

The staff management system used in this study was adapted from Burgio and Burgio’s (1990) Behavioral Supervision model. The components of this system (see Table 2) include clear and specific descriptions of tasks (Smyer, Brannon, & Cohn, 1991), NA self-monitoring, supervisory monitoring, supervisory performance feedback and praise, and incentives for NAs who achieve task criteria.

Enhanced Task Description and NA Self-Monitoring of Performance

The philosophy and rationale of using an FSM system and specific descriptions of NA tasks are presented to the NAs during a one-hour in-service and during the on-the-job training phase. (RNs and LPNs receive one additional hour of in-service training in supervisory techniques.) A key element of NA training focuses on self-monitoring. NAs are asked to rate their own behavioral skills performance by completing an NA Self-Monitoring Form (available from the authors). This form includes 11 of the behavioral skills taught during the in-service and on-the-job training. The form asks the NAs to record any behavioral disturbances exhibited by the residents and to indicate their responses to the behavioral disturbances. NAs are expected to complete one NA Self-Monitoring Form at the end of each shift. To achieve criterion performance, NAs must complete 80% of the assigned checklists.

The behavioral skills on the NA Self-Monitoring Form provide the NAs with a daily reminder of the specific therapeutic procedures they are expected to use. Additionally, self-rating allows the NAs to compare their daily performances with the criteria set by the researchers and nursing home administrators. Previous research has demonstrated that NAs typically complete the forms in less than five minutes. Moreover, NA performance can improve regardless of the accuracy of the self-report (Burgio & Scilley, 1994).

Supervisory Monitoring and Feedback

During the 3-week period of on-the-job training of NAs, the LPNs also receive on-the-job training in supervisory skills from the researchers. LPNs are trained individually to complete the LPN Supervisory Checklist (available from the authors). This checklist is similar to the researchers’ BMSC, but the supervisor’s form is less detailed. Research staff train the LPNs while they are monitoring ADL caregiving interactions. LPNs are given instruction in monitoring NA skill performance, completing the checklist, and providing positive and constructive feedback. Positive feedback is emphasized (“I really liked . . .”), though corrective feedback is also given when necessary (“Next time, . . .”). The LPN Supervisory Checklist allows the LPNs to continue to provide NAs with the specific performance feedback that the researchers provide during on-the-job training. In this way, the researchers can fade out of the management system; the long-term maintenance of the staff management system can be controlled by indigenous supervisory staff. RNs are expected to monitor the LPN’s supervision of NAs to ensure accurate and fair NA evaluations. LPNs are expected to complete one observation and corresponding checklist for each unit NA per week. An observation can be conducted in approximately 10 minutes. A checklist scoring system allows LPNs to calculate the accuracy level of NA performance. NAs are expected to maintain an 80% accuracy score each week.

Incentives

A simple incentive system for NAs is included in the staff management system to encourage compli-
formance with and accurate application of these newly learned skills. The incentive system is designed so that NAs who achieve an accuracy score of 80% or better on the LPN Supervisory Checklist have their names placed in a performance-based lottery. Rewards are distributed through a lottery system due to the potentially large number of NAs achieving criterion performance and the complications involved in providing incentives to multiple NAs. A performance-based lottery provides a fair and economical means of distributing rewards when it is not possible to provide rewards to all individuals who achieve the desired criteria (Iwata, Bailey, Brown, Foshee, & Alpern, 1976).

Each week, one name from each shift on each unit is drawn from the lottery, and each winning individual receives her or his choice of four rewards (each of which is provided daily for one week): (1) free lunch in the nursing home cafeteria; (2) permission to arrive at work 30 minutes later than scheduled; (3) permission to leave work 30 minutes earlier than scheduled; (4) one additional break during the day. To date, permission to leave work 30 minutes earlier than scheduled each day for one week is the incentive chosen most frequently by the NAs.

**Written Performance Feedback**

In addition to verbal feedback and incentives, each NA receives a monthly feedback letter from the director of nursing summarizing the NA's overall performance for that month. NAs reaching or exceeding criteria performance on NA Self-Monitoring Checklist completion and LPN-generated accuracy scores receive positive feedback letters that commend them for reaching criteria. NAs with scores below criteria receive feedback letters that inform them that their performances are below the expected level and advise them that their supervisors will work with them to help them reach criteria. Copies of the letters are also placed in each NA's permanent personnel file at the nursing home.

**Methods**

Behavioral microanalysis is completed to assess the specific effects of behavioral skills training used with and without the formal management system on both staff and resident behaviors; however, in this article, we will limit discussion to those staff behaviors represented on the researcher checklist (described earlier as the BMSC).

Observational data are collected prior to the behavioral skills training in-service (baseline), immediately following on-the-job training (post-intervention) and at follow-up time points occurring approximately every four weeks after post-intervention for up to one year after training (termed follow-up probes). Data collection time points are presented in Table 3. At baseline, NAs are observed providing care to a minimum of three different residents during four separate ADL caregiving situations, allowing NA performance to be assessed during a variety of ADL care needs and in the presence of different resident behaviors.

Each NA–resident dyad observed at baseline is observed again at post-intervention. One of the four NA–resident dyads observed at baseline is observed again at each follow-up assessment (probes). Only NAs completing baseline observations and training activities are observed at post-intervention and at follow-up probes. All consented residents (mostly proxy) in the care of NAs are eligible for observation. Random pairings of NA–resident dyads, though preferable, are prohibited by logistics and the availability of consented residents. Rather, researchers generate a list of all NA–resident dyads available for observation. To obtain the required number of observations, researchers contact the NAs immediately prior to periods known to be common ADL care times (typically 8:00 a.m., 10:00 a.m., 1:00 p.m., 3:30 p.m., and 6:00 p.m.) and ask the NAs to notify them before providing care to an eligible resident. In the initial in-service, and in response to NAs questions on the unit, NAs are informed that observations are conducted to gather information on residents' behaviors and responses to NAs' use of behavior management skills. Thus, NAs are not "blinded" to the purpose of the observations, but the focus is directed toward resident—not staff—behavior.

Data obtained from NA observations can address two primary research questions: (1) Do NAs use the behavior management skills taught during in-service and on-the-job training? (2) Does the FSM system differentially influence long-term maintenance of these skills when compared with equally trained units using conventional staff management (CSM) procedures?

**Results**

The results presented here represent the effect of behavioral skills training and follow-up assessment activities on two nursing home units. Across the two units, 18 NAs received the 5-hour behavioral skills in-

<table>
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<tr>
<th>Phase of Project</th>
<th>Components</th>
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<tr>
<td>Baseline (4-week period)</td>
<td>BMSC evaluations by researchers (4 per NA), No feedback provided</td>
</tr>
<tr>
<td>Intervention (4-week period)</td>
<td>In-service training, NA on-the-job training sessions by researchers (1 per NA per day)</td>
</tr>
<tr>
<td>Post-intervention (4-week period)</td>
<td>BMSC evaluations by researchers (4 per NA), No feedback provided</td>
</tr>
<tr>
<td>Follow-up probesb</td>
<td>BMSC evaluations by researchers (1 per NA), No feedback provided</td>
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*bBehavioral Management Skills Checklist.
*Conducted at approximately four week intervals after initial Postintervention assessment; continued for 12 months.
service and the 3 weeks of on-the-job training. Of the 18 NAs trained on the first two nursing units, 15 (83%) reached criterion (80% or above accuracy score on the BMSC) by the end of the third week of on-the-job training.

Two critical components of the FSM system are supervision and self-monitoring. LPN supervision of NAs’ use of behavioral skills is achieved during weekly evaluations. Compliance rates in completing the assigned checklists have been extremely high to date. At the time this article was written, the two LPNs from the FSM unit had been participating in the study for a total of 46 weeks. Each LPN supervised six NAs. One LPN had a 100% completion rate and the other had a 98% completion rate. These high rates of compliance suggest that LPNs are readily able to incorporate formal NA evaluations into their daily routines. The results from the LPNs’ evaluations of NAs suggest frequent and accurate use of behavior management skills. According to LPN evaluations, the mean performance of NAs from the FSM unit reached 80% accuracy during the second week of on-the-job training. The completion of NA self-monitoring checklists is another important process variable. Expressed as a unit average, NAs from the FSM unit achieved criterion performance (80%) within one week of initiation of on-the-job training; these completion rates remained at or above the 80% for the following nine months.

Observational data collected by research staff using the BMSC directly address NA behavioral skill usage. The rates of announcing care activities and producing positive statements were analyzed using the Wilcoxon Sign Rank test, which is a nonparametric test and was chosen due to the small, uneven sample. As we expected, preliminary findings from one unit utilizing FSM and another utilizing CSM indicate a significant increase in NAs’ use of behavior management skills on both units. The rate of announcing care activities (i.e., while assisting the resident) showed a significant increase immediately after on-the-job training on both FSM (p < .009) and CSM (p < .005) units. NAs’ baseline mean rate per minute of announcing activities was .63 and .40 on the FSM and CSM units, respectively. Immediately after on-the-job training, the mean rate per minute increased to 1.36 and .85 on the FSM and CSM units, respectively. The three follow-up assessments conducted at 26-, 38-, and 46-weeks post-intervention suggested that NAs on the FSM unit continued to announce activities at a rate significantly greater than at baseline (p < .01, p < .03, p < .05, respectively). At 22-weeks post-intervention, the mean rate of announcing activities had dropped to near baseline levels on the CSM unit; however, after remedial training and implementation of FSM procedures, the unit’s rate of announcing activities increased to a mean rate of 1.02 (a significant increase over the 22-week assessment, p < .006). NAs’ use of positive statements (e.g., “thank you,” “good,” “I love you”) increased dramatically after training on both units. On the FSM unit, NAs increased their mean rate per minute from .14 positive statements at baseline to 1.22 immediately after on-the-job training (p < .005), and to even higher rate of 1.6 at 26-weeks post-intervention (p < .004), to 1.02 at 37-weeks post-intervention (p < .05), and to .96 at 45-weeks post-intervention (p < .03). On the CSM unit, the mean rate per minute of positive statements at baseline was .11. Immediately after on-the-job training, it increased to .45 (p < .01); however, by the 22-week follow-up assessment, the rate decreased to a near-baseline level of .22. After remedial training and implementation of FSM procedures, the unit’s announcing activities increased to a mean rate of .84, a significant increase over the 22-week follow-up assessment (p < .001).

Discussion

Preliminary findings from this 4-year project indicate that a 5-hour in-service workshop and intensive on-the-job training increase NAs’ knowledge of behavioral skills. However, providing NAs with the knowledge necessary to give high quality care to residents is only the first step in obtaining skilled NA performance on the unit. On-the-job training appears to facilitate the use of the skills taught during in-services and allows the trainers to correct skill deficits or inaccuracies in performance. On-the-job training may be necessary to ensure accurate skill performance, but a formal system of staff management also appears to be necessary for the NAs to maintain skill performance over time. NAs on both the FSM and CSM units experienced equivalent behavior management skills training and exposure to data collection procedures. Yet approximately 22 weeks after on-the-job training, NAs participating in the FSM system demonstrated greater skill usage when compared with a similarly trained group of NAs who had been exposed to the formal supervisory system. NA retention at follow-up was similar across units: only one NA from each of the nursing units was unavailable for the 22-week follow-up probe. Our earlier research showed a similar FSM system to be effective in increasing NAs’ use of prompted voiding (Burgio, Engel, Hawkins, McComick, Scheve, & Jones, 1990). Our current research suggests that a staff management system that uses a combination of NA self-monitoring and LPN supervisory monitoring and feedback can also be used effectively to evaluate the performance of behavior management skills. Our experience in this and earlier research programs shows that all levels of nursing staff will support a formal system of staff management if it is simple to use, justified, and clearly explained. It is crucial that the staff management system be set up in a manner that is both objective and fair.

We believe that the program described in this article can be implemented on nursing units without additional staffing and that replication of this project in other nursing homes can be achieved with minimal cost. Costs directly related to behavior management skills training involved two elements: in-service workshops and on-the-job training. The initial development of the in-service curriculum contributed the greatest cost to the system. Curriculum development on this project, a collaborative effort between nursing home
staff members and the research team, was time-consuming; however, similar training programs (minus the staff management procedures) are already available from various sources (Taylor & Ray, 1990; Teri, 1992). In this project, on-the-job training is directed by the research staff and gradually shifted to the nursing supervisors. This training strategy was chosen for research purposes; however, it is our belief that this system could easily be implemented by indigenous staff-development personnel.

The supervisory tasks required from the LPNs are well within their normal job descriptions and can be accomplished with a small amount of direct supervision by LPNs. Additional paperwork is required in the form of formal written evaluation checklists of NA performance; however, it is conceivable that increased effectiveness and long-term use of skill training activities will offset any additional costs incurred by a formal management system. The cost of the incentive system for the NAs can also be minimal. The nursing home participating in this project chose to use a menu of incentives that does not incur any direct costs. For example, the most popular incentive, leaving 30 minutes early, occurs at shift change when there is ample staffing due to the overlap in shift personnel. While it is our belief that nursing homes will not find the cost of implementing behavior management skills training and a formal staff management system to be prohibitive, we are in the process of conducting a formal cost-effectiveness analysis to confirm our impressions.

Due to the research goals of this project, much of the paperwork required by the FSM system has been completed by research staff. As this article goes to press, the extent to which the supervisory personnel would be willing to perform FSM tasks, such as calculating the percentage of self-monitoring forms completed by NAs, remains unclear. It should also be noted that the mere presence of the research staff in the nursing home may influence staff performance. Although the follow-up probe assessments occur after the research staff has completed each unit’s training intervention, the research staff continues to train other nursing units, thus maintaining a presence in the nursing home. At this time, we cannot assess the effects of the system in the absence of research staff.

References


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